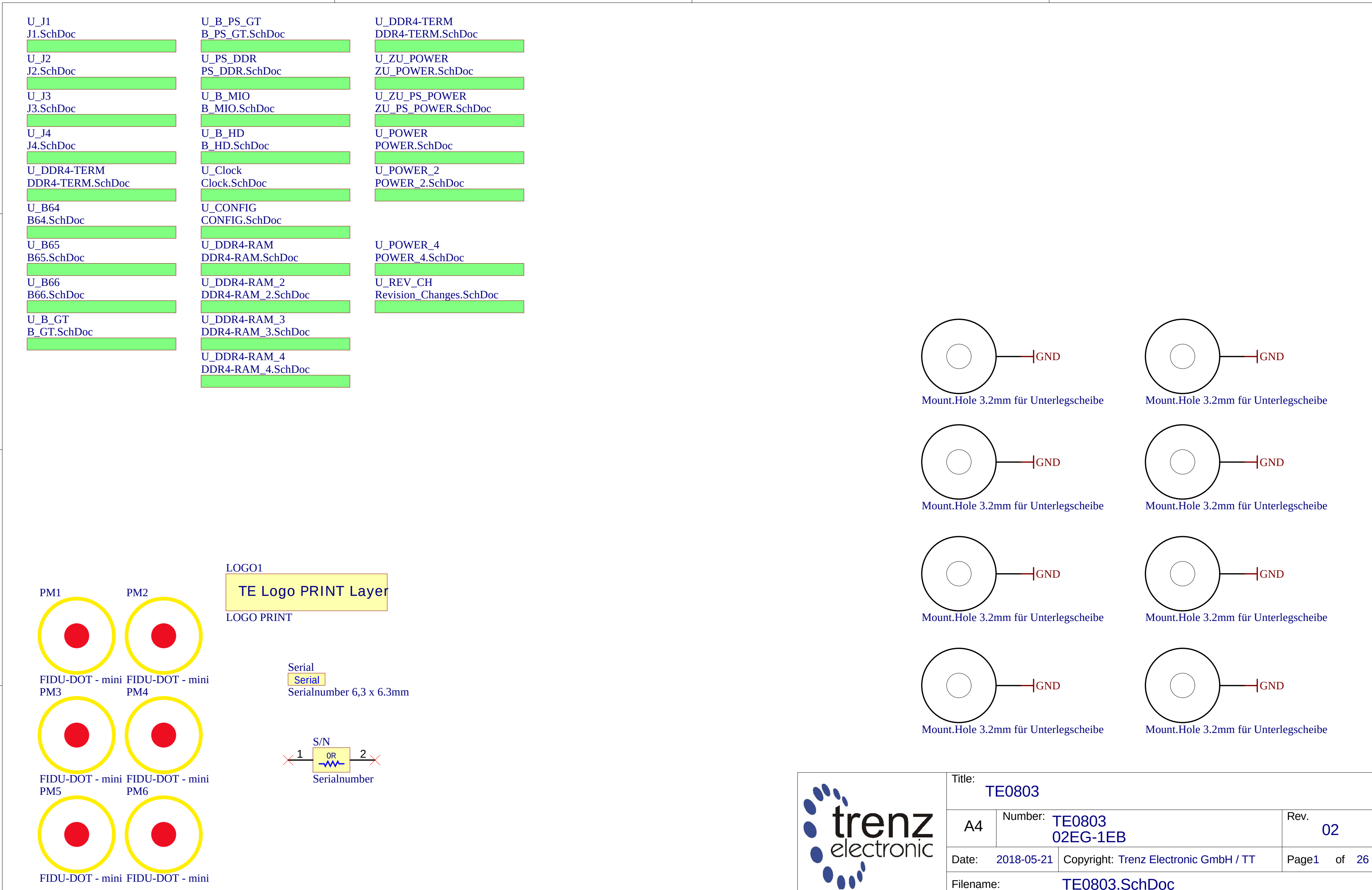
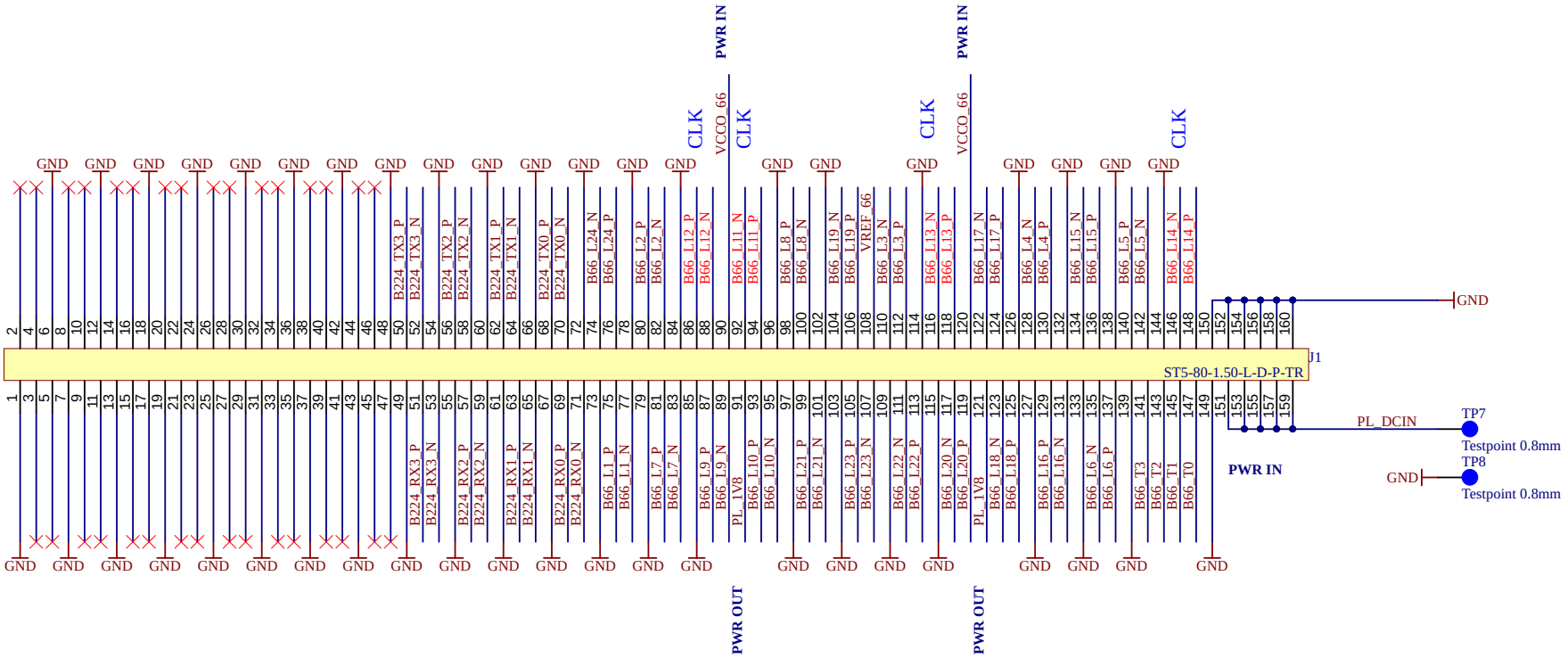
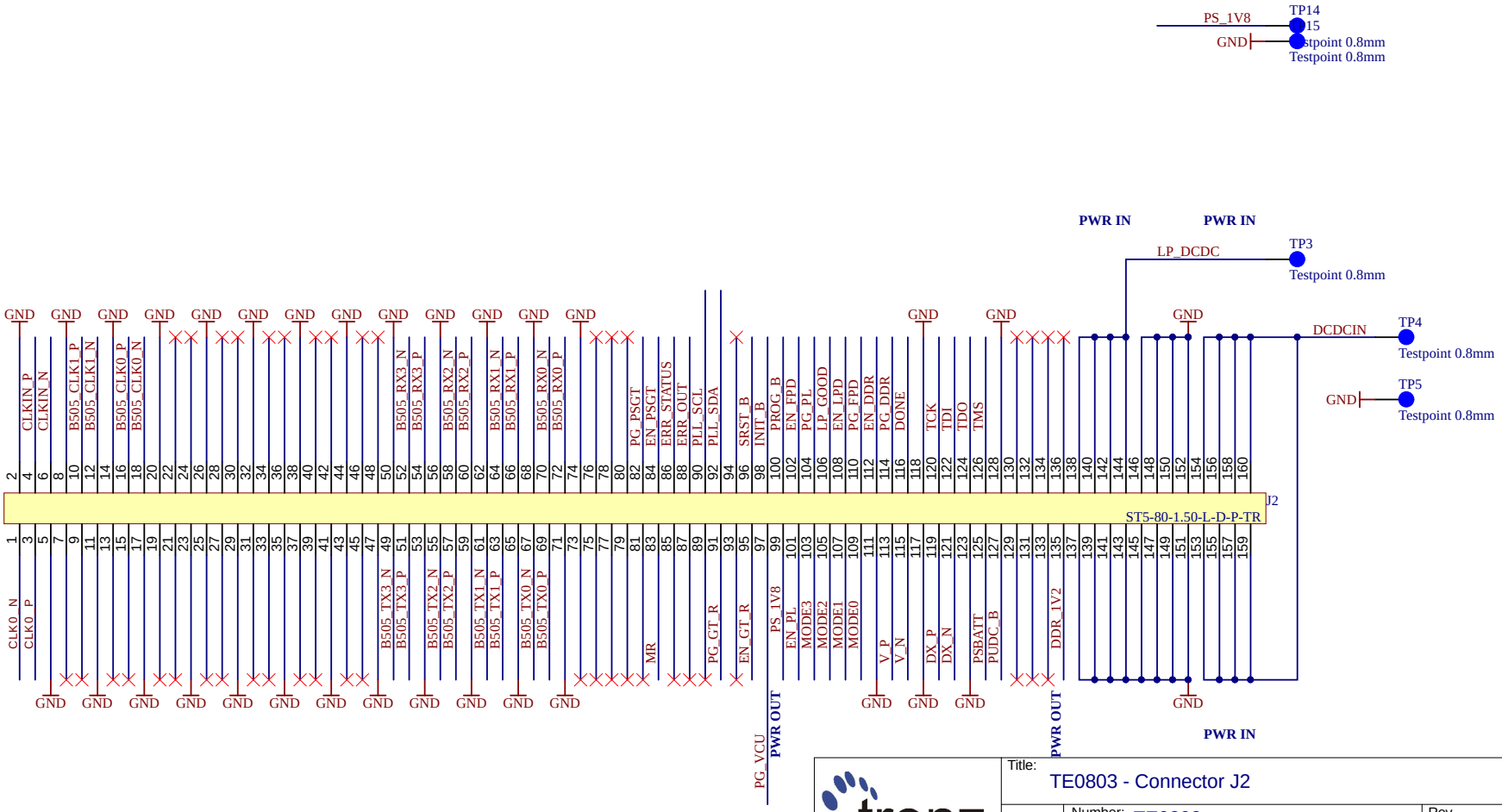


trenz electronic	Title: TE0803		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page1 of 26
	Filename: TE0803.SchDoc		

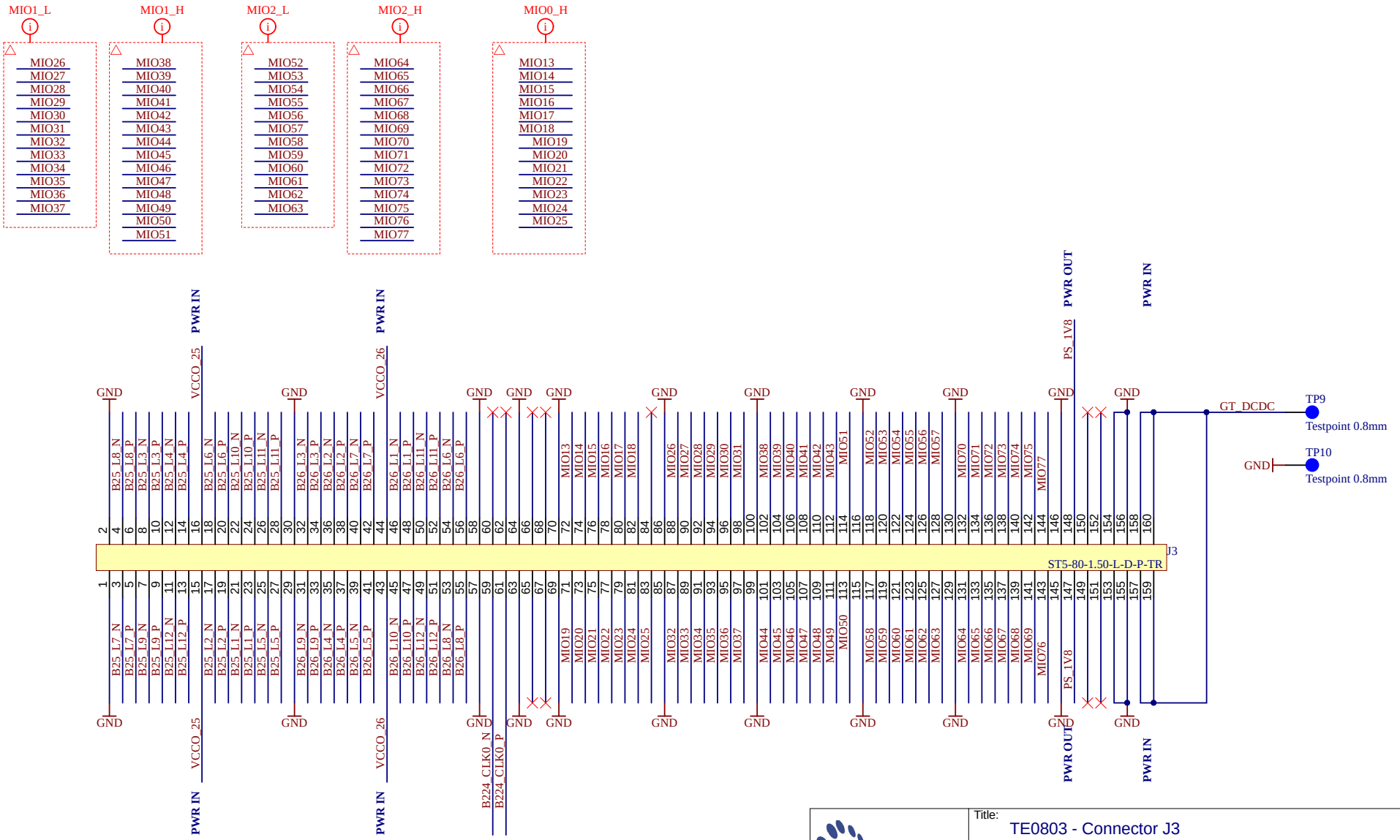


Title: TE0803 - Connector J1			
A4	Number: TE0803 02EG-1EB		Rev. 02
Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT		Page2 of 26
Filename: J1.SchDoc			



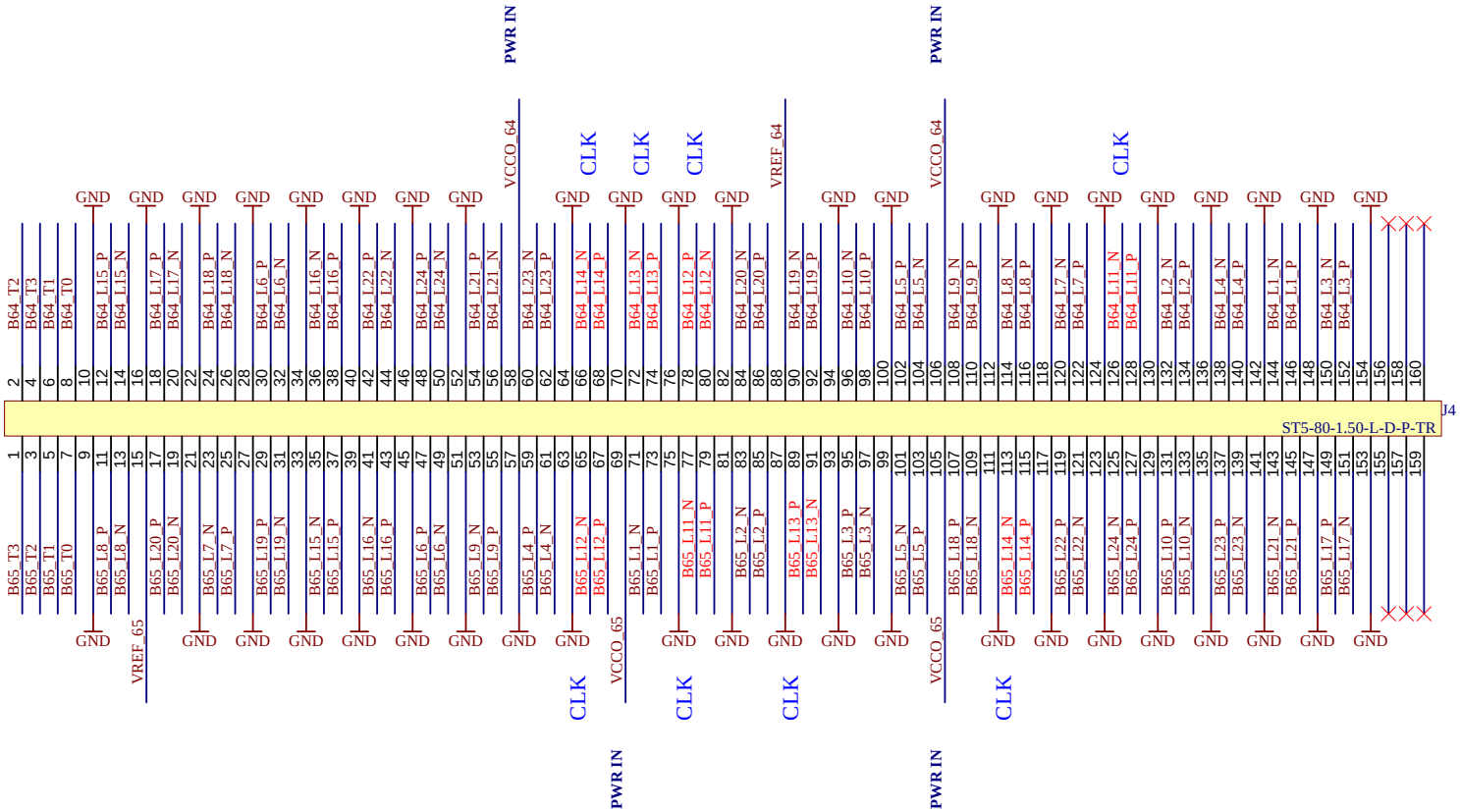
trenz electronic

Title: TE0803 - Connector J2			
A4	Number: TE0803 02EG-1EB		Rev. 02
Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT		Page3 of 26
Filename: J2.SchDoc			

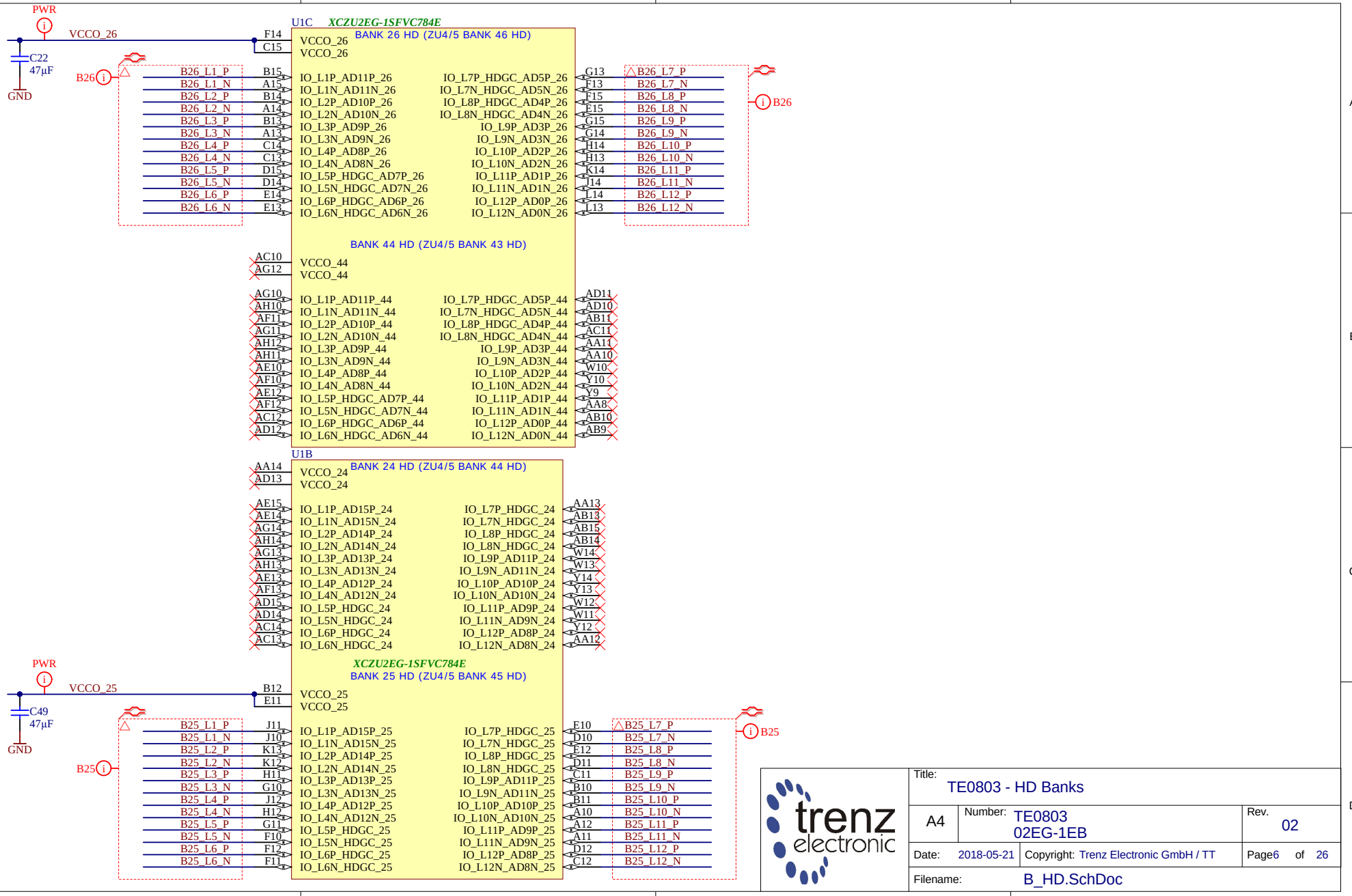


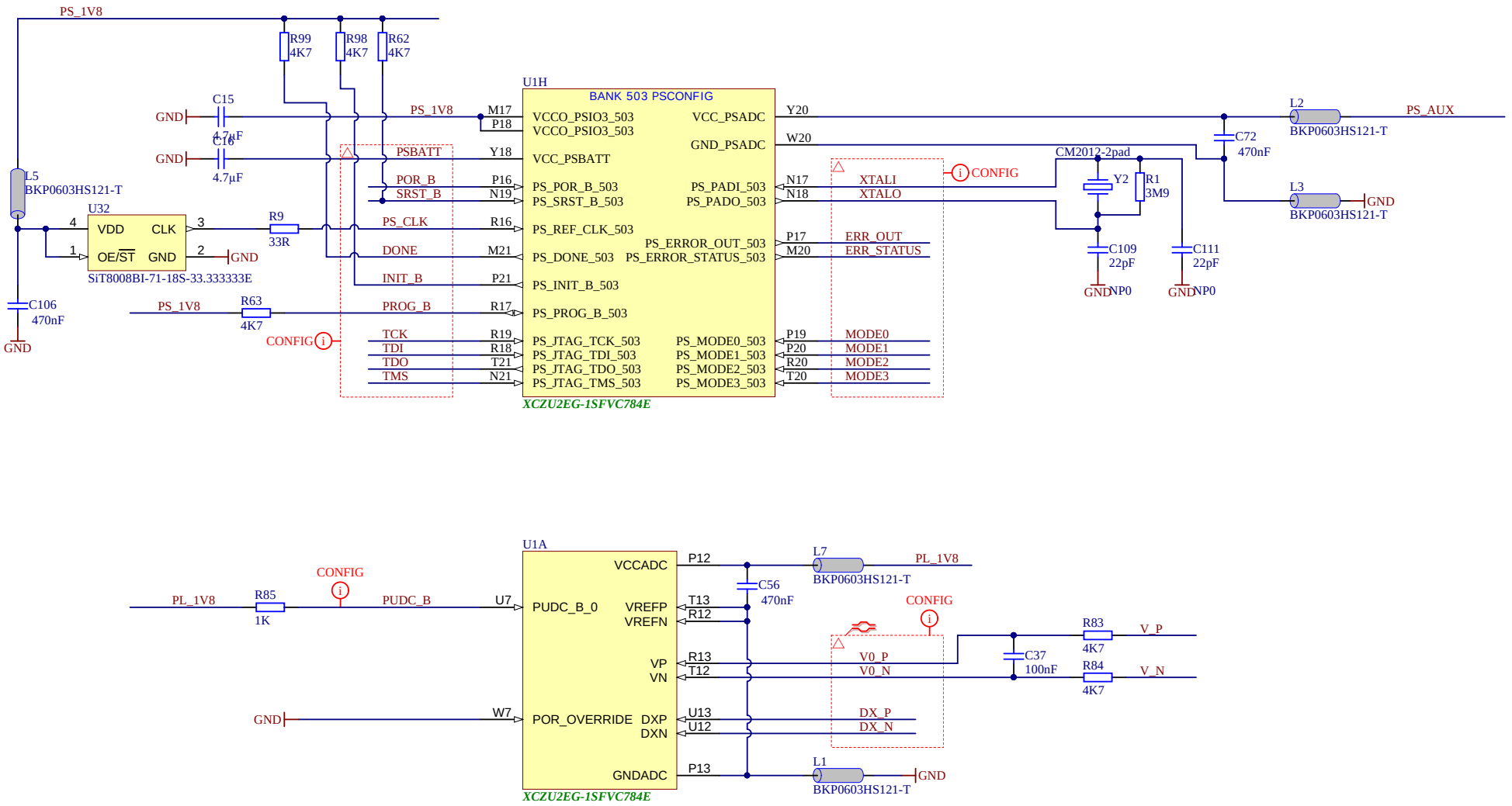
trenz electronic

Title: TE0803 - Connector J3		
A4	Number: TE0803 02EG-1EB	Rev. 02
Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page4 of 26
Filename: J3.SchDoc		

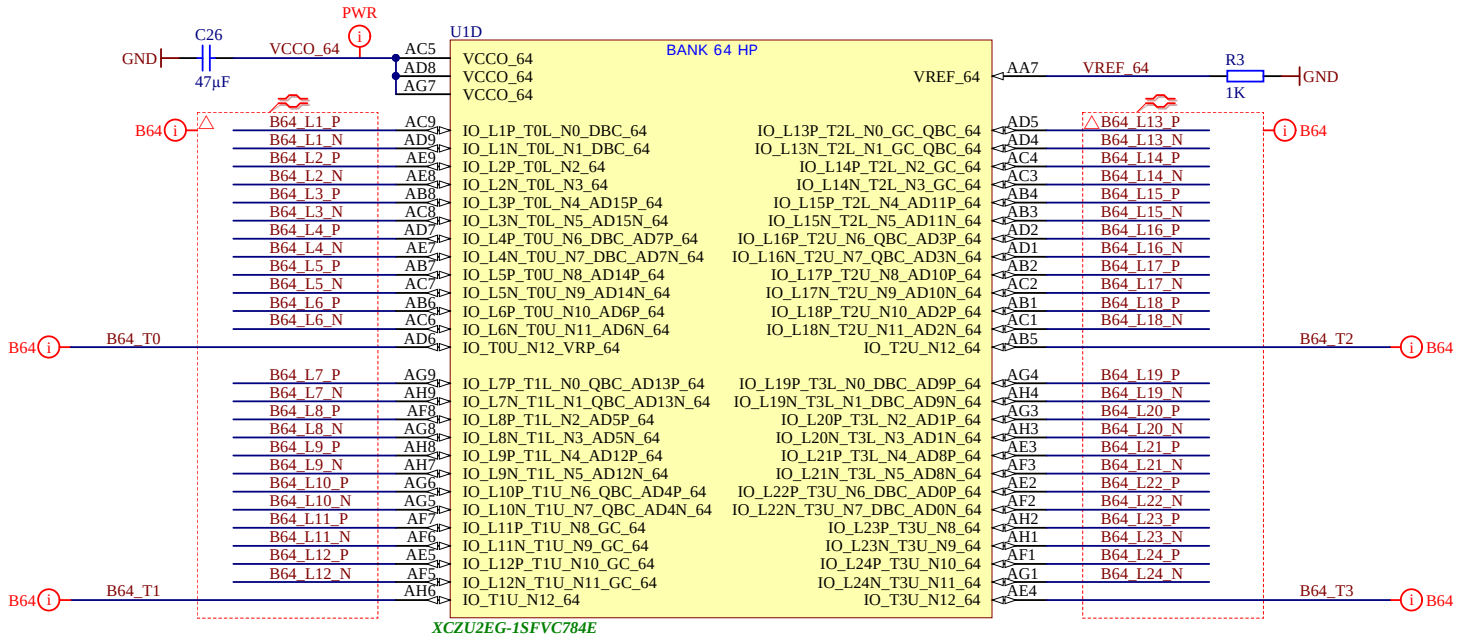


trenz electronic	Title: TE0803 - Connector J4		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page5 of 26
	Filename: J4.SchDoc		

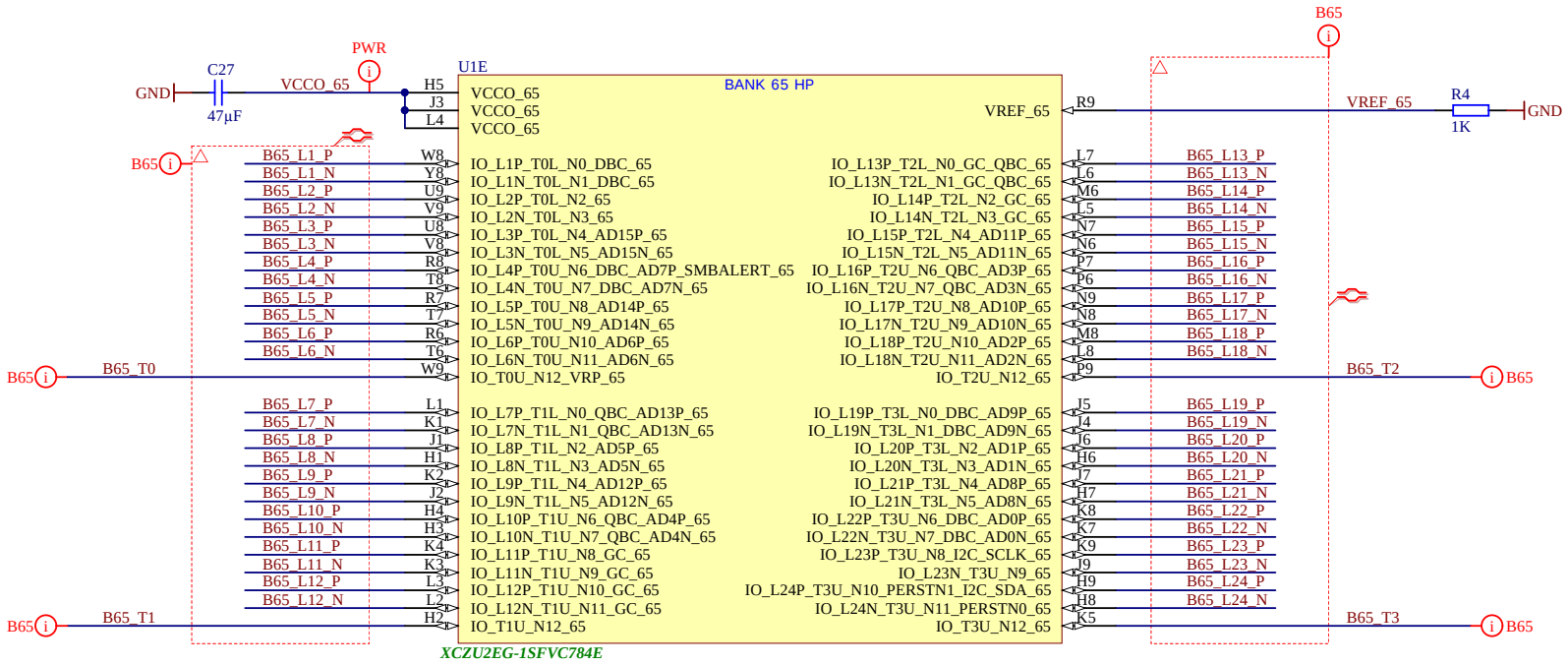

PWR
VCCO_26
C22
47µF
GND
B26
U1C
XCZU2EG-1SFVC784E
BANK 26 HD (ZU4/5 BANK 46 HD)
F14 VCCO_26
C15 VCCO_26
B26_L1_P B15 IO_L1P_AD11P_26
B26_L1_N A15 IO_L1N_AD11N_26
B26_L2_P B14 IO_L2P_AD10P_26
B26_L2_N A14 IO_L2N_AD10N_26
B26_L3_P B13 IO_L3P_AD9P_26
B26_L3_N A13 IO_L3N_AD9N_26
B26_L4_P C14 IO_L4P_AD8P_26
B26_L4_N C13 IO_L4N_AD8N_26
B26_L5_P D15 IO_L5P_HDGC_AD7P_26
B26_L5_N D14 IO_L5N_HDGC_AD7N_26
B26_L6_P E14 IO_L6P_HDGC_AD6P_26
B26_L6_N E13 IO_L6N_HDGC_AD6N_26
IO_L7P_HDGC_AD5P_26 G13 B26_L7_P
IO_L7N_HDGC_AD5N_26 F13 B26_L7_N
IO_L8P_HDGC_AD4P_26 F15 B26_L8_P
IO_L8N_HDGC_AD4N_26 E15 B26_L8_N
IO_L9P_AD3P_26 G15 B26_L9_P
IO_L9N_AD3N_26 G14 B26_L9_N
IO_L10P_AD2P_26 H14 B26_L10_P
IO_L10N_AD2N_26 H13 B26_L10_N
IO_L11P_AD1P_26 K14 B26_L11_P
IO_L11N_AD1N_26 J14 B26_L11_N
IO_L12P_AD0P_26 L14 B26_L12_P
IO_L12N_AD0N_26 L13 B26_L12_N
B26
BANK 44 HD (ZU4/5 BANK 43 HD)
AC10 VCCO_44
AG12 VCCO_44
AG10 IO_L1P_AD11P_44
AH10 IO_L1N_AD11N_44
AF11 IO_L2P_AD10P_44
AG11 IO_L2N_AD10N_44
AH12 IO_L3P_AD9P_44
AH11 IO_L3N_AD9N_44
AE10 IO_L4P_AD8P_44
AF10 IO_L4N_AD8N_44
AE12 IO_L5P_HDGC_AD7P_44
AF12 IO_L5N_HDGC_AD7N_44
AC12 IO_L6P_HDGC_AD6P_44
AD12 IO_L6N_HDGC_AD6N_44
IO_L7P_HDGC_AD5P_44 AD11
IO_L7N_HDGC_AD5N_44 AD10
IO_L8P_HDGC_AD4P_44 AB11
IO_L8N_HDGC_AD4N_44 AC11
IO_L9P_AD3P_44 AA11
IO_L9N_AD3N_44 AA10
IO_L10P_AD2P_44 W10
IO_L10N_AD2N_44 Y10
IO_L11P_AD1P_44 Y9
IO_L11N_AD1N_44 AA8
IO_L12P_AD0P_44 AB10
IO_L12N_AD0N_44 AB9
U1B
BANK 24 HD (ZU4/5 BANK 44 HD)
AA14 VCCO_24
AD13 VCCO_24
AE15 IO_L1P_AD15P_24
AE14 IO_L1N_AD15N_24
AG14 IO_L2P_AD14P_24
AH14 IO_L2N_AD14N_24
AG13 IO_L3P_AD13P_24
AH13 IO_L3N_AD13N_24
AE13 IO_L4P_AD12P_24
AF13 IO_L4N_AD12N_24
AD15 IO_L5P_HDGC_24
AD14 IO_L5N_HDGC_24
AC14 IO_L6P_HDGC_24
AC13 IO_L6N_HDGC_24
IO_L7P_HDGC_24 AA13
IO_L7N_HDGC_24 AB13
IO_L8P_HDGC_24 AB15
IO_L8N_HDGC_24 AB14
IO_L9P_AD11P_24 W14
IO_L9N_AD11N_24 W13
IO_L10P_AD10P_24 Y14
IO_L10N_AD10N_24 Y13
IO_L11P_AD9P_24 W12
IO_L11N_AD9N_24 W11
IO_L12P_AD8P_24 Y12
IO_L12N_AD8N_24 AA12
XCZU2EG-1SFVC784E
BANK 25 HD (ZU4/5 BANK 45 HD)
PWR
VCCO_25
C49
47µF
GND
B25
B12 VCCO_25
E11 VCCO_25
B25_L1_P J11 IO_L1P_AD15P_25
B25_L1_N J10 IO_L1N_AD15N_25
B25_L2_P K13 IO_L2P_AD14P_25
B25_L2_N K12 IO_L2N_AD14N_25
B25_L3_P H11 IO_L3P_AD13P_25
B25_L3_N G10 IO_L3N_AD13N_25
B25_L4_P J12 IO_L4P_AD12P_25
B25_L4_N H12 IO_L4N_AD12N_25
B25_L5_P G11 IO_L5P_HDGC_25
B25_L5_N F10 IO_L5N_HDGC_25
B25_L6_P F12 IO_L6P_HDGC_25
B25_L6_N F11 IO_L6N_HDGC_25
IO_L7P_HDGC_25 E10 B25_L7_P
IO_L7N_HDGC_25 D10 B25_L7_N
IO_L8P_HDGC_25 E12 B25_L8_P
IO_L8N_HDGC_25 D11 B25_L8_N
IO_L9P_AD11P_25 C11 B25_L9_P
IO_L9N_AD11N_25 B10 B25_L9_N
IO_L10P_AD10P_25 B11 B25_L10_P
IO_L10N_AD10N_25 A10 B25_L10_N
IO_L11P_AD9P_25 A12 B25_L11_P
IO_L11N_AD9N_25 A11 B25_L11_N
IO_L12P_AD8P_25 D12 B25_L12_P
IO_L12N_AD8N_25 C12 B25_L12_N
B25
trenz electronic
Title: TE0803 - HD Banks
A4
Number: TE0803 02EG-1EB
Rev. 02
Date: 2018-05-21
Copyright: Trenz Electronic GmbH / TT
Page6 of 26
Filename: B_HD.SchDoc



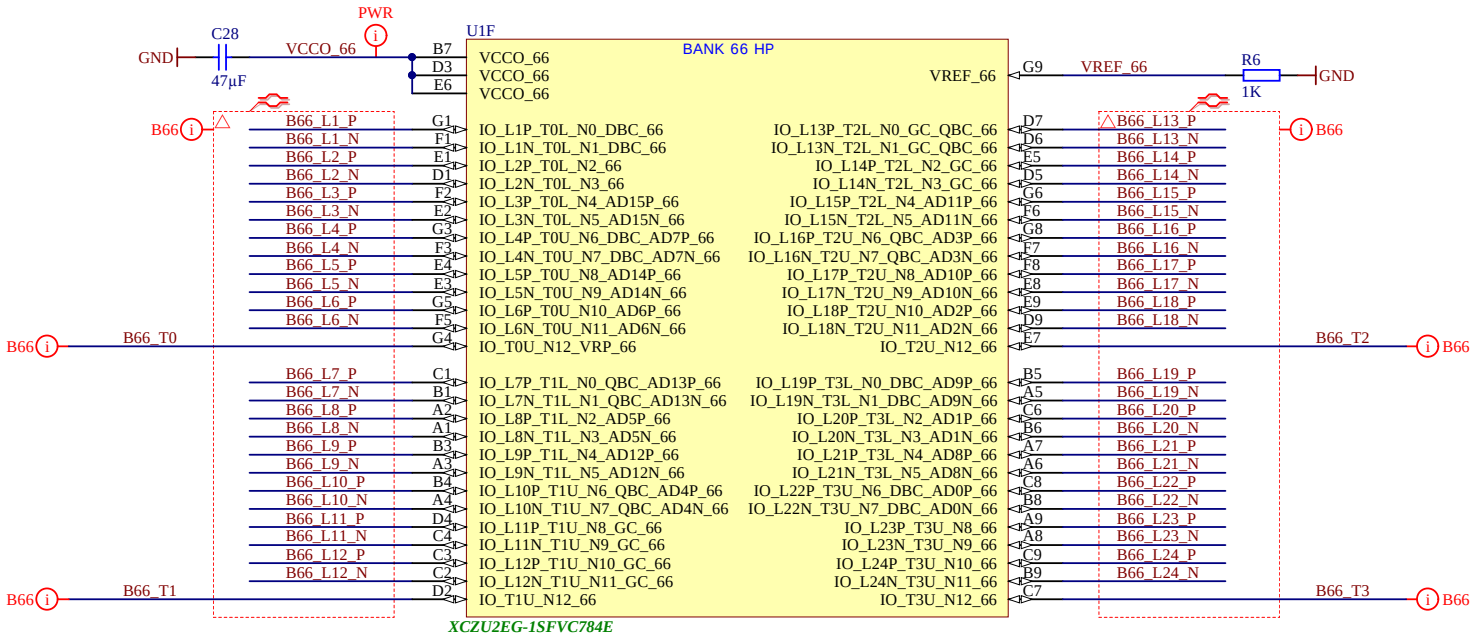
trenz electronic	Title: TE0803 - Config		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page7 of 26
	Filename: CONFIG.SchDoc		



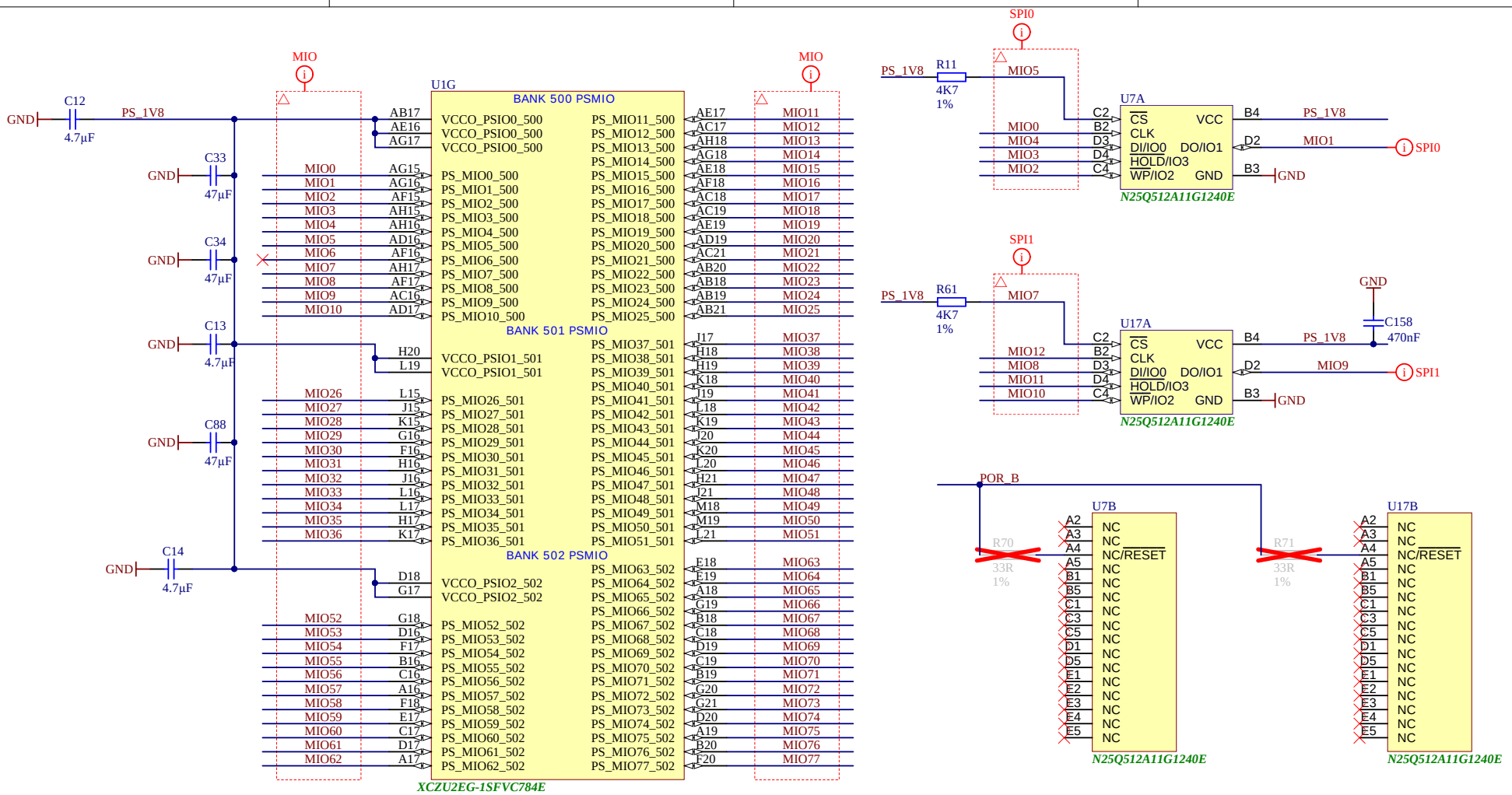
trenz electronic	Title: TE0803 - B64		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page8 of 26
	Filename: B64.SchDoc		



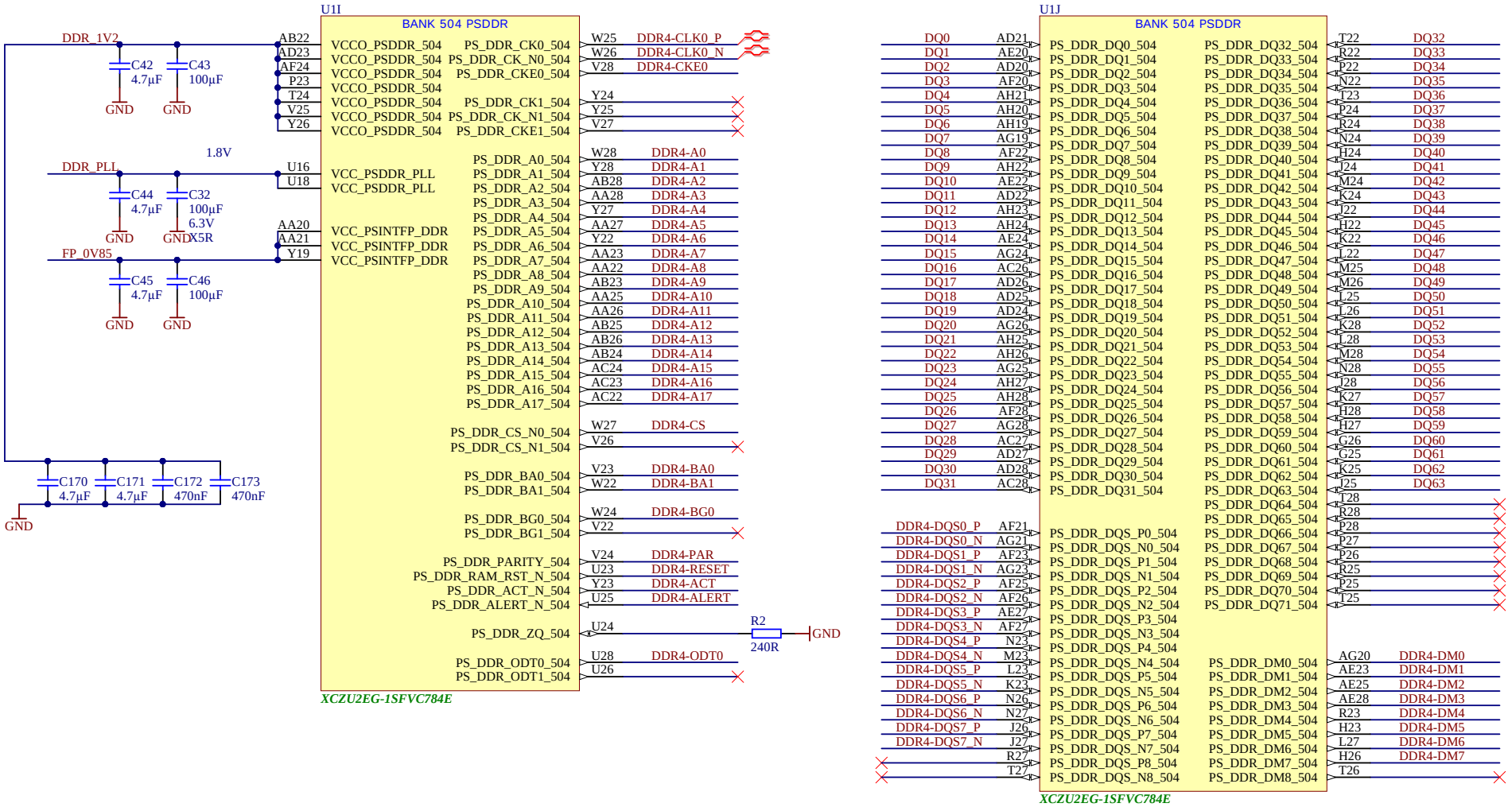
trenz electronic	Title: TE0803 - B65		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page9 of 26
	Filename: B65.SchDoc		

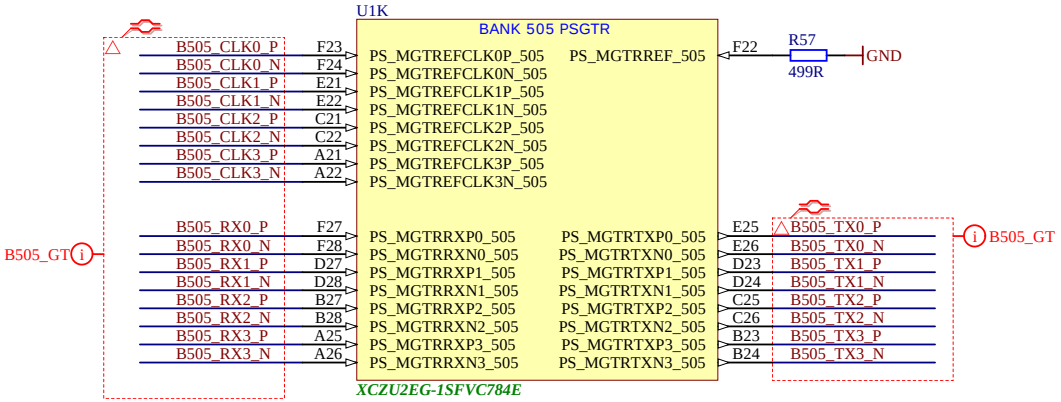


trenz electronic	Title: TE0803 - B66		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page10 of 26
	Filename: B66.SchDoc		

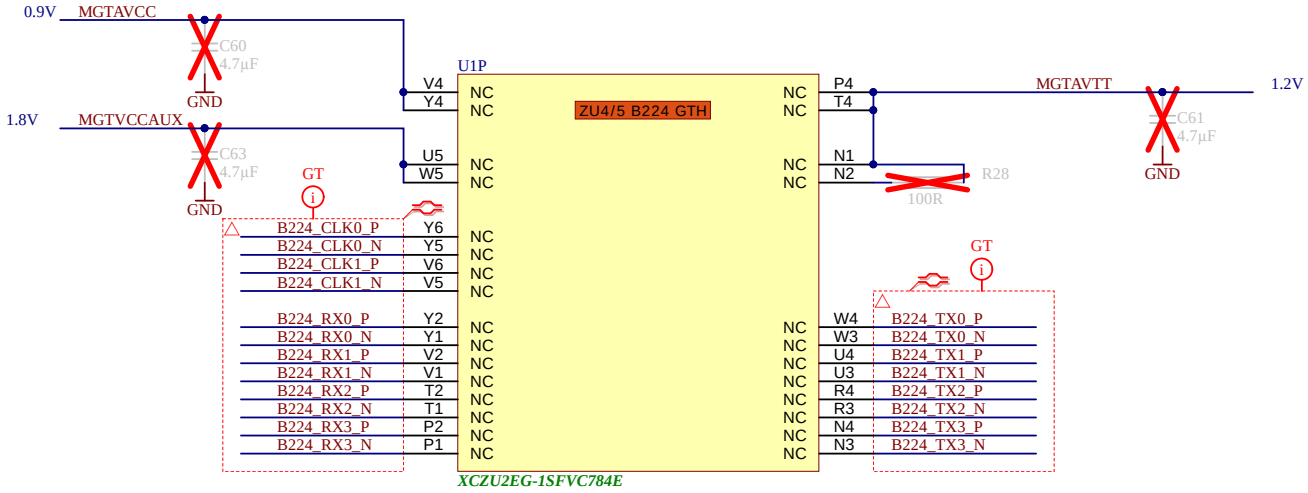


Title: TE0803 - MIO Banks			
A4	Number: TE0803 02EG-1EB		Rev. 02
Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT		Page11 of 26
Filename: B_MIO.SchDoc			

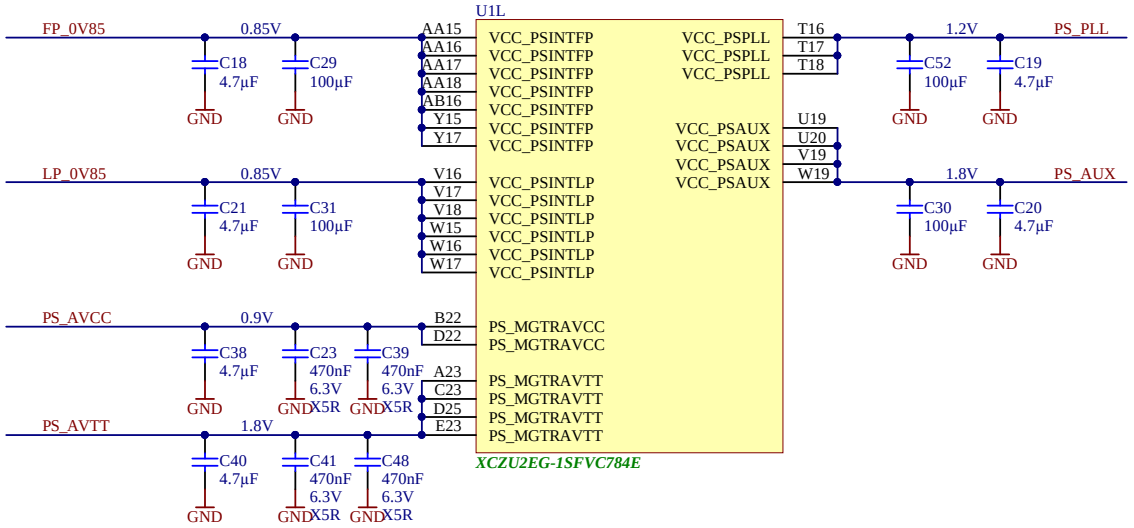

U1I
BANK 504 PSDDR
DDR_1V2
C42 4.7µF
C43 100µF
GND
1.8V
DDR_PLL
C44 4.7µF
C32 100µF 6.3V X5R
FP_0V85
C45 4.7µF
C46 100µF
C170 4.7µF
C171 4.7µF
C172 470nF
C173 470nF
AB22
AD23
AF24
P23
T24
V25
Y26
U16
U18
AA20
AA21
Y19
VCCO_PSDDR_504
VCC_PSDDR_PLL
VCC_PSINTFP_DDR
PS_DDR_CK0_504
PS_DDR_CK_N0_504
PS_DDR_CKE0_504
PS_DDR_CK1_504
PS_DDR_CK_N1_504
PS_DDR_CKE1_504
PS_DDR_A0_504
PS_DDR_A1_504
PS_DDR_A2_504
PS_DDR_A3_504
PS_DDR_A4_504
PS_DDR_A5_504
PS_DDR_A6_504
PS_DDR_A7_504
PS_DDR_A8_504
PS_DDR_A9_504
PS_DDR_A10_504
PS_DDR_A11_504
PS_DDR_A12_504
PS_DDR_A13_504
PS_DDR_A14_504
PS_DDR_A15_504
PS_DDR_A16_504
PS_DDR_A17_504
PS_DDR_CS_N0_504
PS_DDR_CS_N1_504
PS_DDR_BA0_504
PS_DDR_BA1_504
PS_DDR_BG0_504
PS_DDR_BG1_504
PS_DDR_PARITY_504
PS_DDR_RAM_RST_N_504
PS_DDR_ACT_N_504
PS_DDR_ALERT_N_504
PS_DDR_ZQ_504
PS_DDR_ODT0_504
PS_DDR_ODT1_504
W25 DDR4-CLK0_P
W26 DDR4-CLK0_N
V28 DDR4-CKE0
Y24
Y25
V27
W28 DDR4-A0
Y28 DDR4-A1
AB28 DDR4-A2
AA28 DDR4-A3
Y27 DDR4-A4
AA27 DDR4-A5
Y22 DDR4-A6
AA23 DDR4-A7
AA22 DDR4-A8
AB23 DDR4-A9
AA25 DDR4-A10
AA26 DDR4-A11
AB25 DDR4-A12
AB26 DDR4-A13
AB24 DDR4-A14
AC24 DDR4-A15
AC23 DDR4-A16
AC22 DDR4-A17
W27 DDR4-CS
V26
V23 DDR4-BA0
W22 DDR4-BA1
W24 DDR4-BG0
V22
V24 DDR4-PAR
U23 DDR4-RESET
Y23 DDR4-ACT
U25 DDR4-ALERT
U24
R2 240R
GND
U28 DDR4-ODT0
U26
XCZU2EG-1SFVC784E
U1J
BANK 504 PSDDR
DQ0 AD21
DQ1 AE20
DQ2 AD20
DQ3 AF20
DQ4 AH21
DQ5 AH20
DQ6 AH19
DQ7 AG19
DQ8 AF22
DQ9 AH22
DQ10 AE22
DQ11 AD22
DQ12 AH23
DQ13 AH24
DQ14 AE24
DQ15 AG24
DQ16 AC26
DQ17 AD26
DQ18 AD25
DQ19 AD24
DQ20 AG26
DQ21 AH25
DQ22 AH26
DQ23 AG25
DQ24 AH27
DQ25 AH28
DQ26 AF28
DQ27 AG28
DQ28 AC27
DQ29 AD27
DQ30 AD28
DQ31 AC28
DDR4-DQS0_P AF21
DDR4-DQS0_N AG21
DDR4-DQS1_P AF23
DDR4-DQS1_N AG23
DDR4-DQS2_P AF25
DDR4-DQS2_N AF26
DDR4-DQS3_P AE27
DDR4-DQS3_N AF27
DDR4-DQS4_P N23
DDR4-DQS4_N M23
DDR4-DQS5_P L23
DDR4-DQS5_N K23
DDR4-DQS6_P N26
DDR4-DQS6_N N27
DDR4-DQS7_P J26
DDR4-DQS7_N J27
R27
T27
PS_DDR_DQ0_504
PS_DDR_DQ1_504
PS_DDR_DQ2_504
PS_DDR_DQ3_504
PS_DDR_DQ4_504
PS_DDR_DQ5_504
PS_DDR_DQ6_504
PS_DDR_DQ7_504
PS_DDR_DQ8_504
PS_DDR_DQ9_504
PS_DDR_DQ10_504
PS_DDR_DQ11_504
PS_DDR_DQ12_504
PS_DDR_DQ13_504
PS_DDR_DQ14_504
PS_DDR_DQ15_504
PS_DDR_DQ16_504
PS_DDR_DQ17_504
PS_DDR_DQ18_504
PS_DDR_DQ19_504
PS_DDR_DQ20_504
PS_DDR_DQ21_504
PS_DDR_DQ22_504
PS_DDR_DQ23_504
PS_DDR_DQ24_504
PS_DDR_DQ25_504
PS_DDR_DQ26_504
PS_DDR_DQ27_504
PS_DDR_DQ28_504
PS_DDR_DQ29_504
PS_DDR_DQ30_504
PS_DDR_DQ31_504
PS_DDR_DQS_P0_504
PS_DDR_DQS_N0_504
PS_DDR_DQS_P1_504
PS_DDR_DQS_N1_504
PS_DDR_DQS_P2_504
PS_DDR_DQS_N2_504
PS_DDR_DQS_P3_504
PS_DDR_DQS_N3_504
PS_DDR_DQS_P4_504
PS_DDR_DQS_N4_504
PS_DDR_DQS_P5_504
PS_DDR_DQS_N5_504
PS_DDR_DQS_P6_504
PS_DDR_DQS_N6_504
PS_DDR_DQS_P7_504
PS_DDR_DQS_N7_504
PS_DDR_DQS_P8_504
PS_DDR_DQS_N8_504
PS_DDR_DQ32_504
PS_DDR_DQ33_504
PS_DDR_DQ34_504
PS_DDR_DQ35_504
PS_DDR_DQ36_504
PS_DDR_DQ37_504
PS_DDR_DQ38_504
PS_DDR_DQ39_504
PS_DDR_DQ40_504
PS_DDR_DQ41_504
PS_DDR_DQ42_504
PS_DDR_DQ43_504
PS_DDR_DQ44_504
PS_DDR_DQ45_504
PS_DDR_DQ46_504
PS_DDR_DQ47_504
PS_DDR_DQ48_504
PS_DDR_DQ49_504
PS_DDR_DQ50_504
PS_DDR_DQ51_504
PS_DDR_DQ52_504
PS_DDR_DQ53_504
PS_DDR_DQ54_504
PS_DDR_DQ55_504
PS_DDR_DQ56_504
PS_DDR_DQ57_504
PS_DDR_DQ58_504
PS_DDR_DQ59_504
PS_DDR_DQ60_504
PS_DDR_DQ61_504
PS_DDR_DQ62_504
PS_DDR_DQ63_504
PS_DDR_DQ64_504
PS_DDR_DQ65_504
PS_DDR_DQ66_504
PS_DDR_DQ67_504
PS_DDR_DQ68_504
PS_DDR_DQ69_504
PS_DDR_DQ70_504
PS_DDR_DQ71_504
PS_DDR_DM0_504
PS_DDR_DM1_504
PS_DDR_DM2_504
PS_DDR_DM3_504
PS_DDR_DM4_504
PS_DDR_DM5_504
PS_DDR_DM6_504
PS_DDR_DM7_504
PS_DDR_DM8_504
T22 DQ32
R22 DQ33
P22 DQ34
N22 DQ35
T23 DQ36
P24 DQ37
R24 DQ38
N24 DQ39
H24 DQ40
J24 DQ41
M24 DQ42
K24 DQ43
J22 DQ44
H22 DQ45
K22 DQ46
L22 DQ47
M25 DQ48
M26 DQ49
L25 DQ50
L26 DQ51
K28 DQ52
L28 DQ53
M28 DQ54
N28 DQ55
J28 DQ56
K27 DQ57
H28 DQ58
H27 DQ59
G26 DQ60
G25 DQ61
K25 DQ62
J25 DQ63
T28
R28
P28
P27
P26
R25
P25
T25
AG20 DDR4-DM0
AE23 DDR4-DM1
AE25 DDR4-DM2
AE28 DDR4-DM3
R23 DDR4-DM4
H23 DDR4-DM5
L27 DDR4-DM6
H26 DDR4-DM7
T26
XCZU2EG-1SFVC784E
trenz electronic
Title: TE0803 - PS_DDR
A4
Number: TE0803 02EG-1EB
Rev. 02
Date: 2018-05-21
Copyright: Trenz Electronic GmbH / TT
Page12 of 26
Filename: PS_DDR.SchDoc



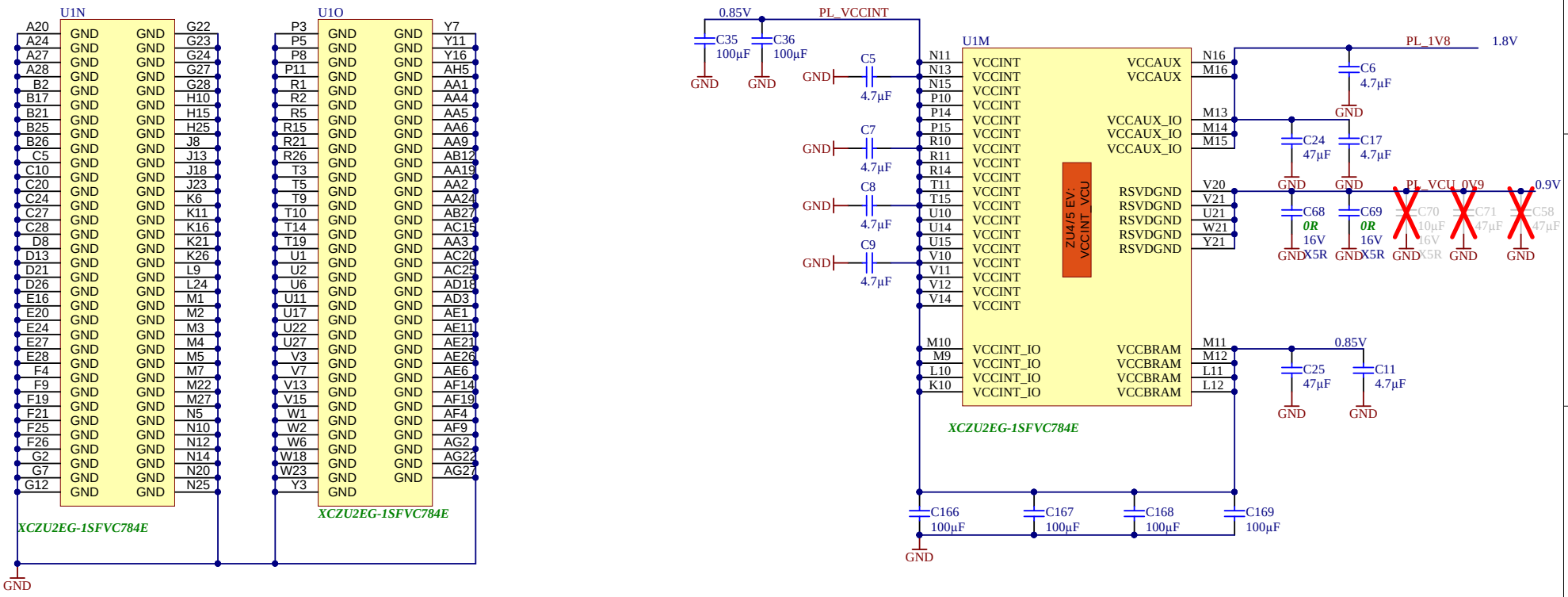
trenz electronic	Title: TE0803 - PS_GT		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page13 of 26
	Filename: B_PS_GT.SchDoc		



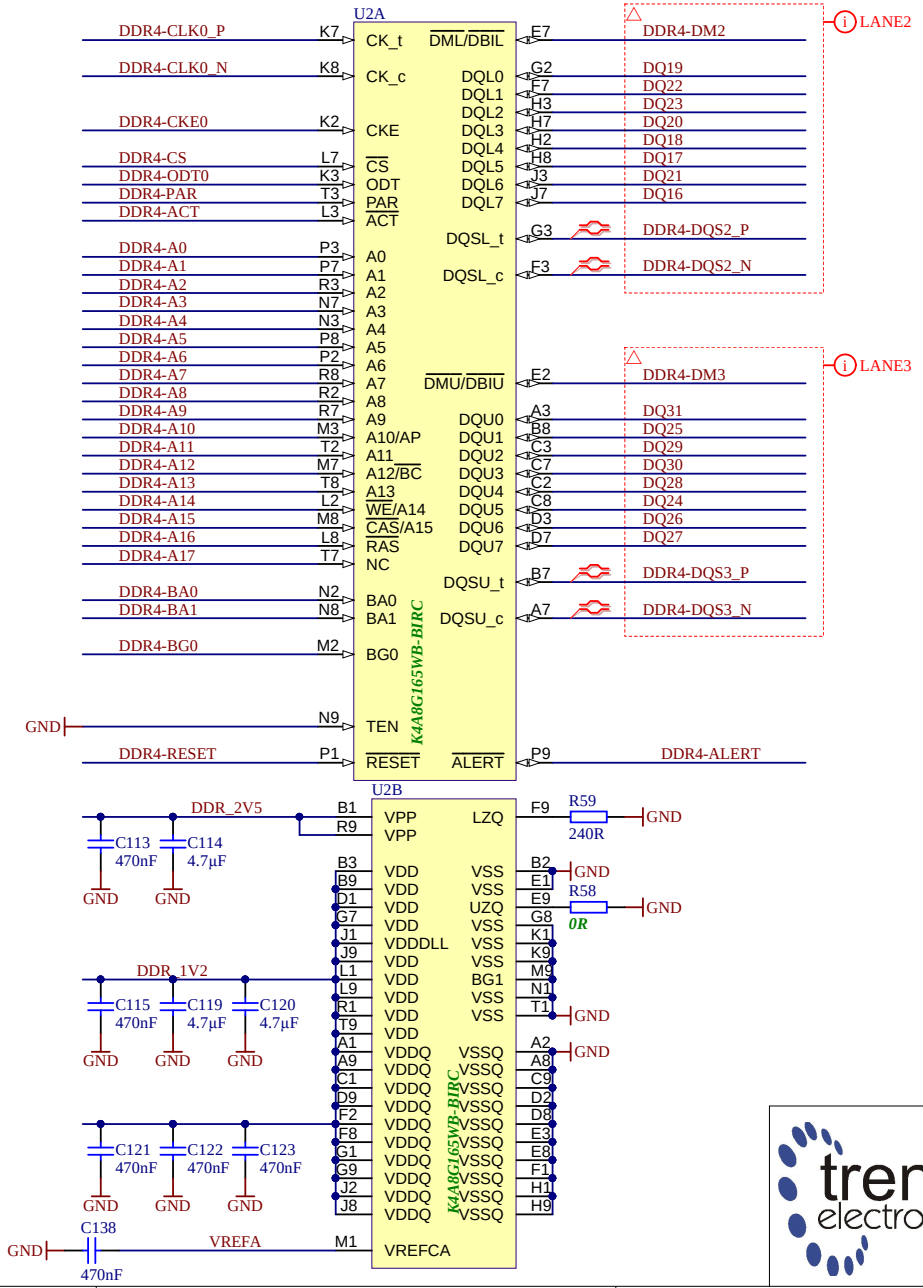
trenz electronic	Title: TE0803 - B224GTH		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page14 of 26
	Filename: B_GT.SchDoc		



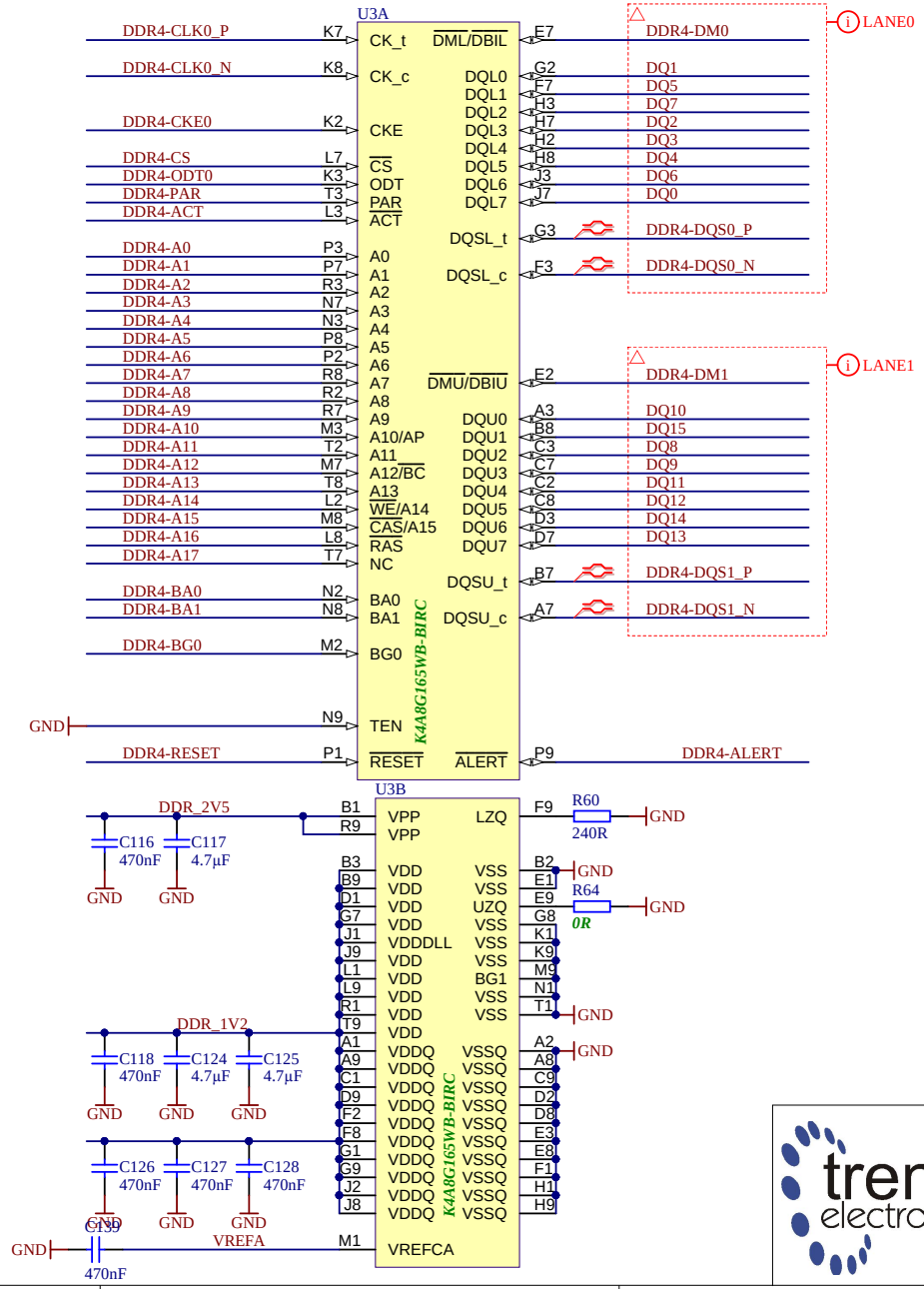
trenz electronic	Title: TE0803 - ZU_PS_POWER		
A4	Number: TE0803 02EG-1EB		Rev. 02
Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT		Page15 of 26
Filename: ZU_PS_POWER.SchDoc			



trenz electronic	Title: TE0803 - ZU_POWER		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page16 of 26
	Filename: ZU_POWER.SchDoc		



	Title: TE0803 - DDR4_1_RAM		
A4	Number: TE0803 02EG-1EB		Rev. 02
Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT		Page17 of 26
Filename: DDR4-RAM.SchDoc			



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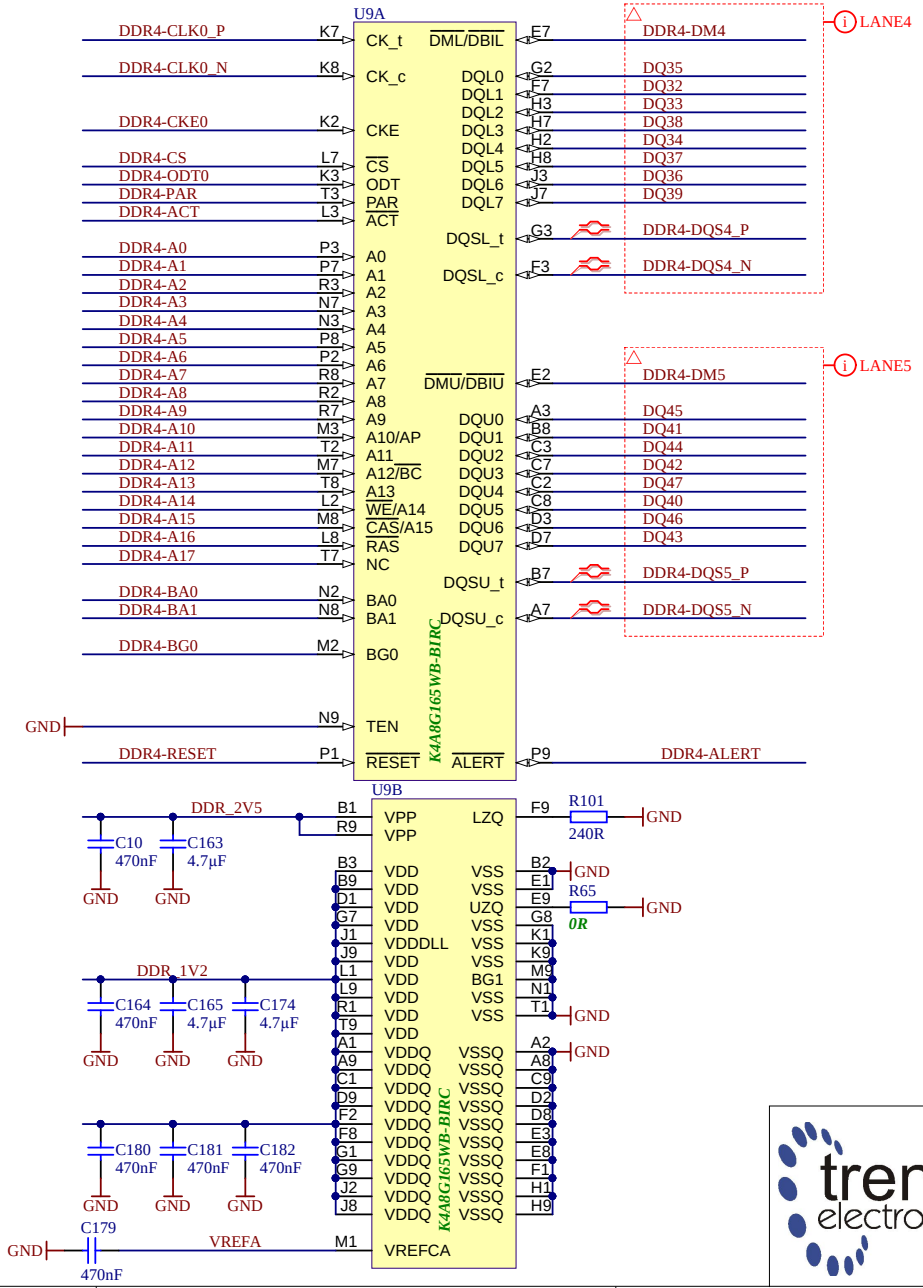
Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT		Page18 of 26
Filename: DDR4-RAM_2.SchDoc			



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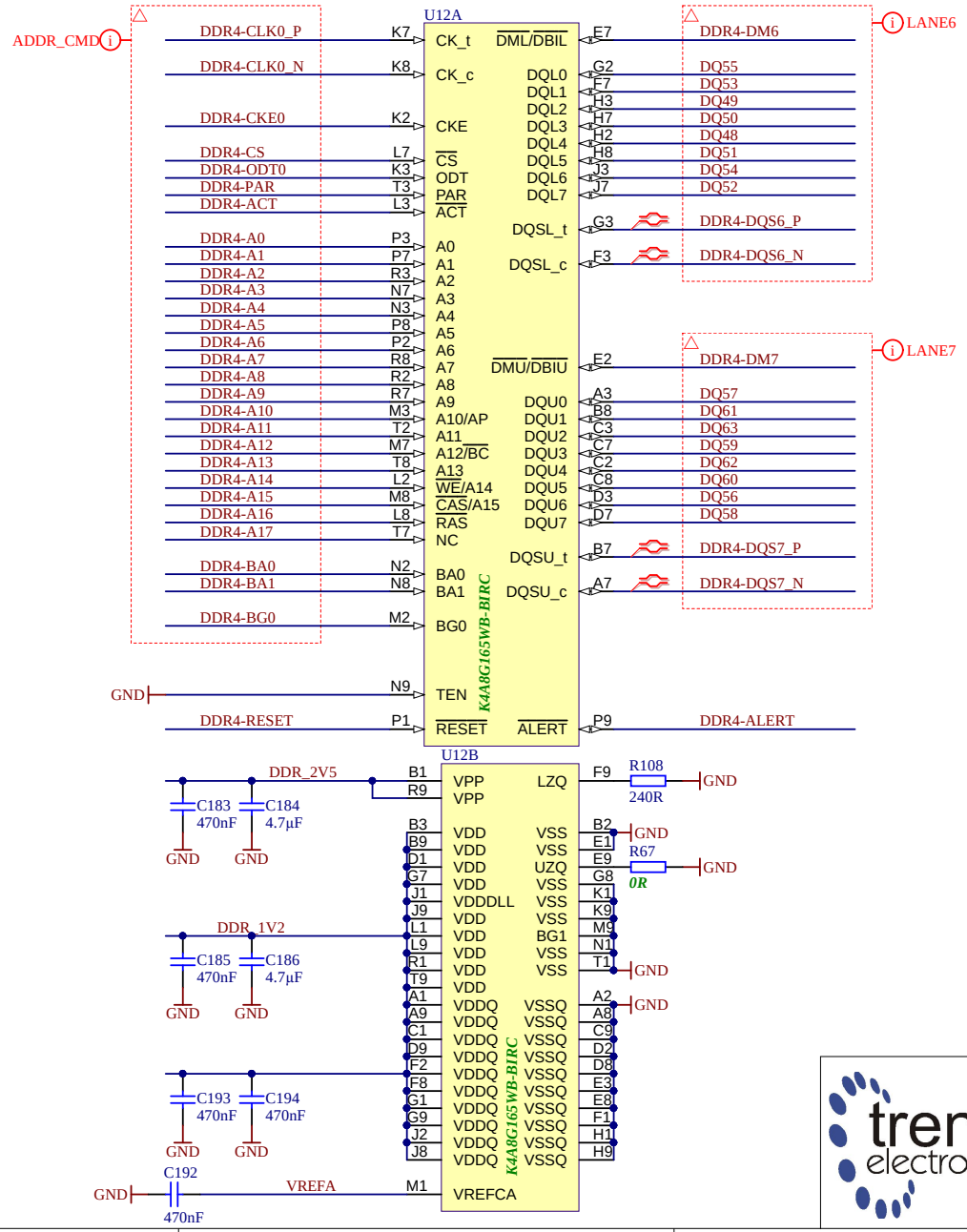
A4	Number: TE0803 02EG-1EB		Rev. 02
Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT		Page19 of 26
Filename: DDR4-RAM_3.SchDoc			



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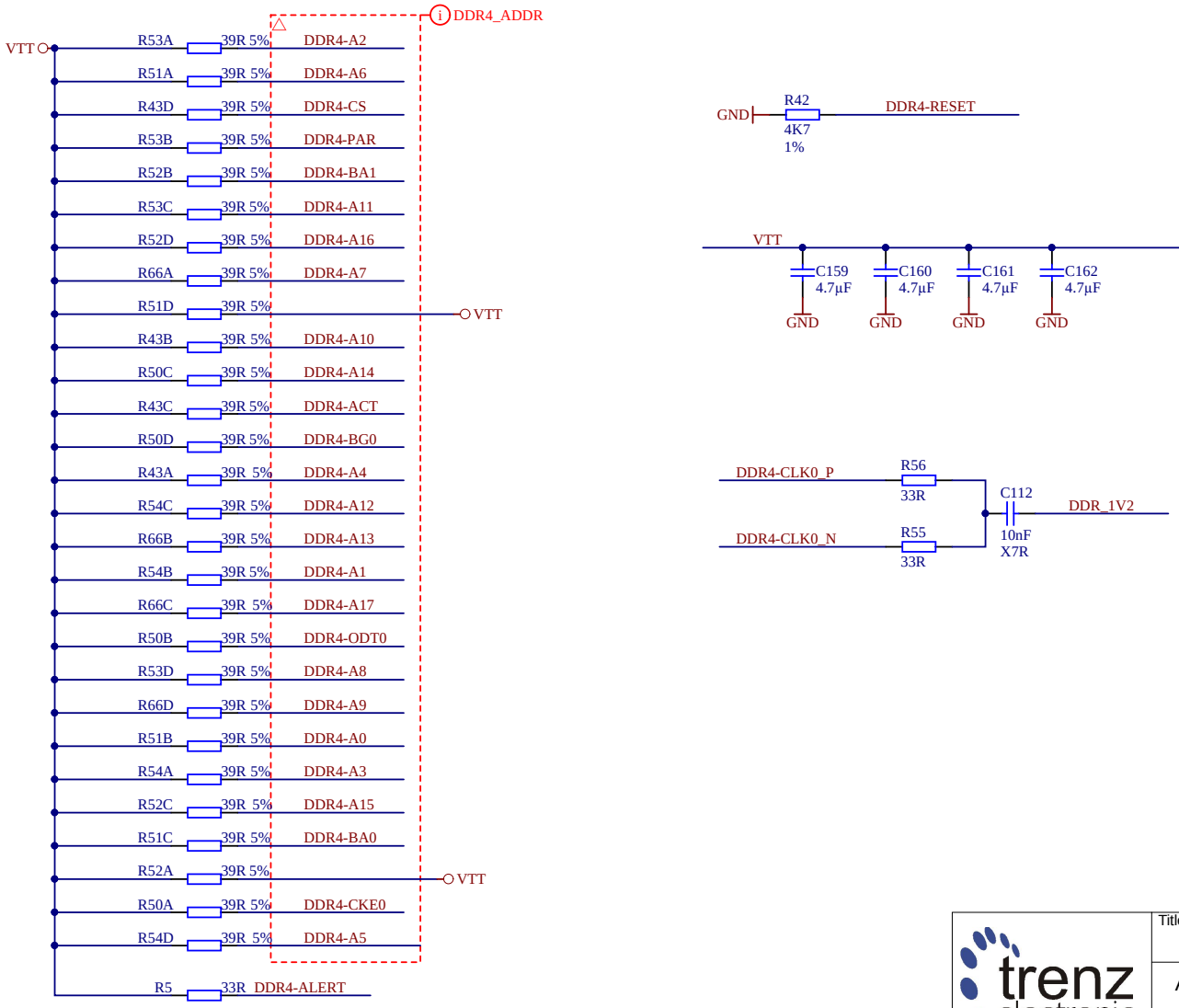
A4	Number: TE0803 02EG-1EB	Rev. 02
Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page20 of 26
Filename: DDR4-RAM_4.SchDoc		



trenz electronic	Title: TE0803 - DDR4_TERM		
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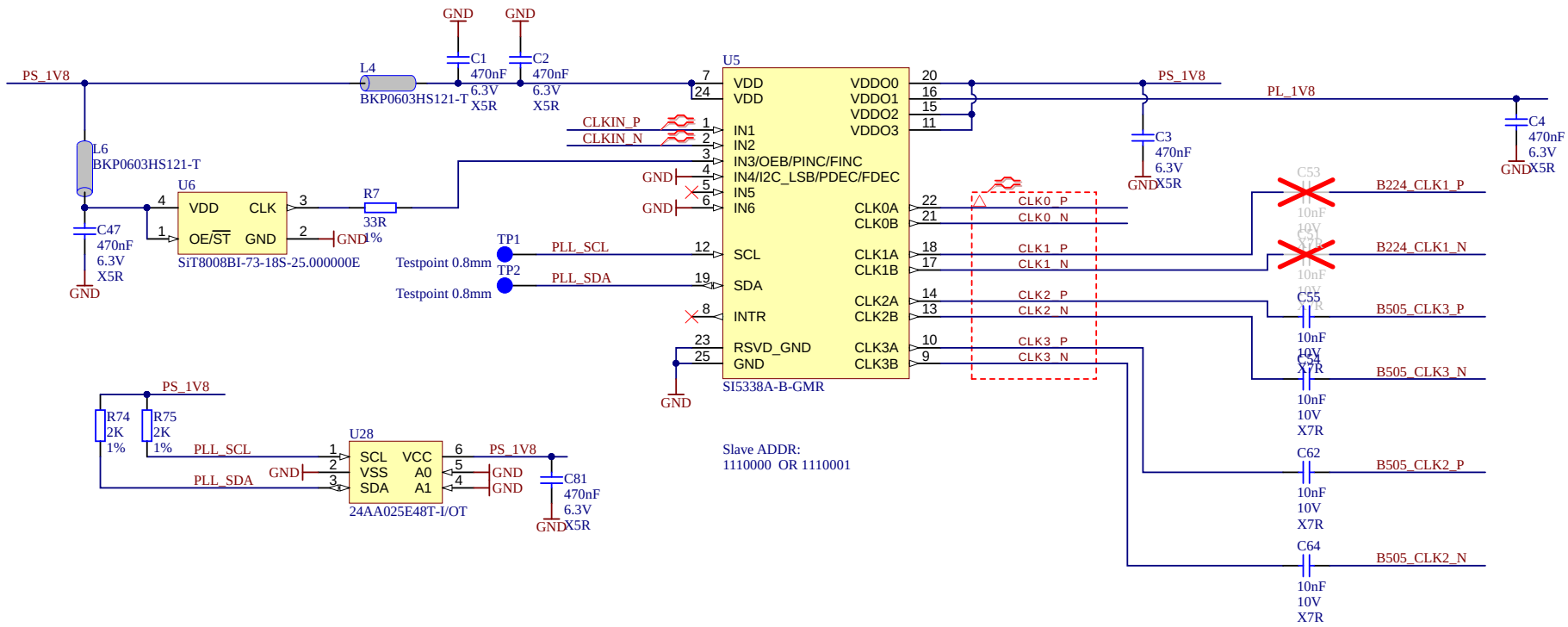
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page21 of 26
	Filename: DDR4-TERM.SchDoc		



trenz electronic	Title: TE0803 - CLOCK		
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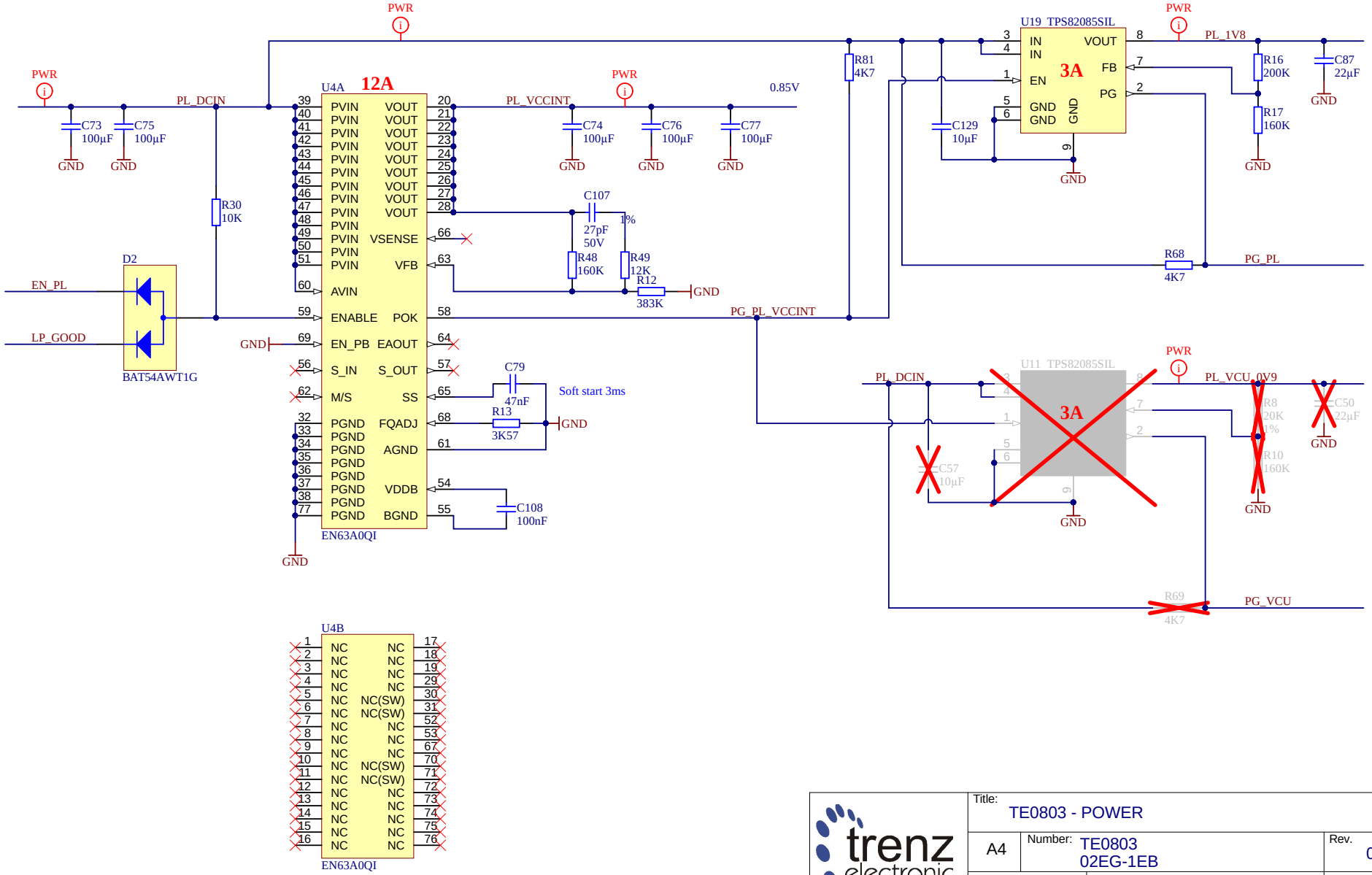
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page22 of 26
	Filename: Clock.SchDoc		


PWR
PL_DCIN
C73 100µF
C75 100µF
GND
R30 10K
D2
EN_PL
LP_GOOD
BAT54AWT1G
U4A
12A
EN63A0QI
PVIN
VOUT
AVIN
ENABLE
POK
EN_PB
EAOUT
S_IN
S_OUT
M/S
SS
PGND
FQADJ
AGND
VDDB
BGND
VSENSE
VFB
PL_VCCINT
C74 100µF
C76 100µF
C77 100µF
0.85V
C107 27pF 50V
1%
R48 160K
R49 12K
R12 383K
C79 47nF
Soft start 3ms
R13 3K57
C108 100nF
R81 4K7
PG_PL_VCCINT
U19 TPS82085SIL
3A
IN
EN
FB
PG
GND
C129 10µF
PL_1V8
R16 200K
R17 160K
C87 22µF
R68 4K7
PG_PL
U11 TPS82085SIL
PL_VCU_0V9
R8 20K 1%
R10 160K
C50 22µF
C57 10µF
R69 4K7
PG_VCU
U4B
NC
NC(SW)
EN63A0QI
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Title: TE0803 - POWER
A4
Number: TE0803 02EG-1EB
Rev. 02
Date: 2018-05-21
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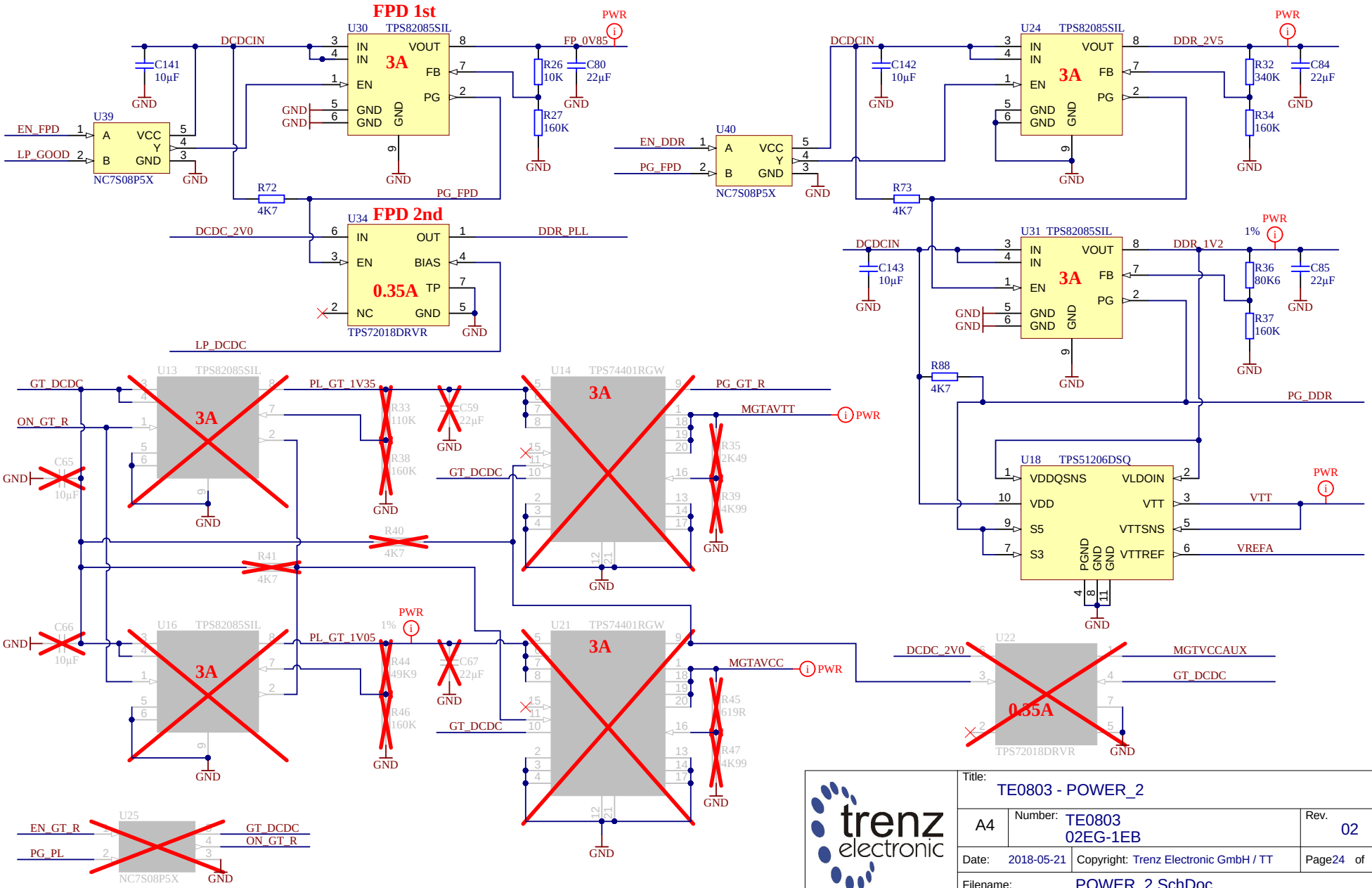
Page23 of 26
Filename: POWER.SchDoc


FPD 1st
FPD 2nd
U30 TPS82085SIL
U24 TPS82085SIL
U31 TPS82085SIL
U34
U39
U40
U13 TPS82085SIL
U14 TPS74401RGW
U16 TPS82085SIL
U21 TPS74401RGW
U18 TPS51206DSQ
U22
U25
TPS72018DRVR
NC7S08P5X
3A
0.35A
DCDCIN
DCDC_2V0
EN_FPD
LP_GOOD
EN_DDR
PG_FPD
LP_DCDC
DDR_PLL
DDR_2V5
DDR_1V2
FP_0V85
PG_FPD
PG_DDR
PG_GT_R
PL_GT_1V35
PL_GT_1V05
GT_DCDC
ON_GT_R
EN_GT_R
PG_PL
MGTAVTT
MGTAVCC
MGTVCCAUX
VTT
VREFA
PWR
GND
R72 4K7
R73 4K7
R88 4K7
R40 4K7
R41 4K7
C141 10µF
C142 10µF
C143 10µF
C65 10µF
C66 10µF
R26 10K
R27 160K
C80 22µF
R32 340K
R34 160K
C84 22µF
R36 80K6
R37 160K
C85 22µF
R33 110K
R38 160K
C59 22µF
R35 2K49
R39 4K99
R44 49K9
R46 160K
C67 22µF
R45 619R
R47 4K99
1%
Title: TE0803 - POWER_2
A4
Number: TE0803 02EG-1EB
Rev. 02
Date: 2018-05-21
Copyright: Trenz Electronic GmbH / TT
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Filename: POWER_2.SchDoc
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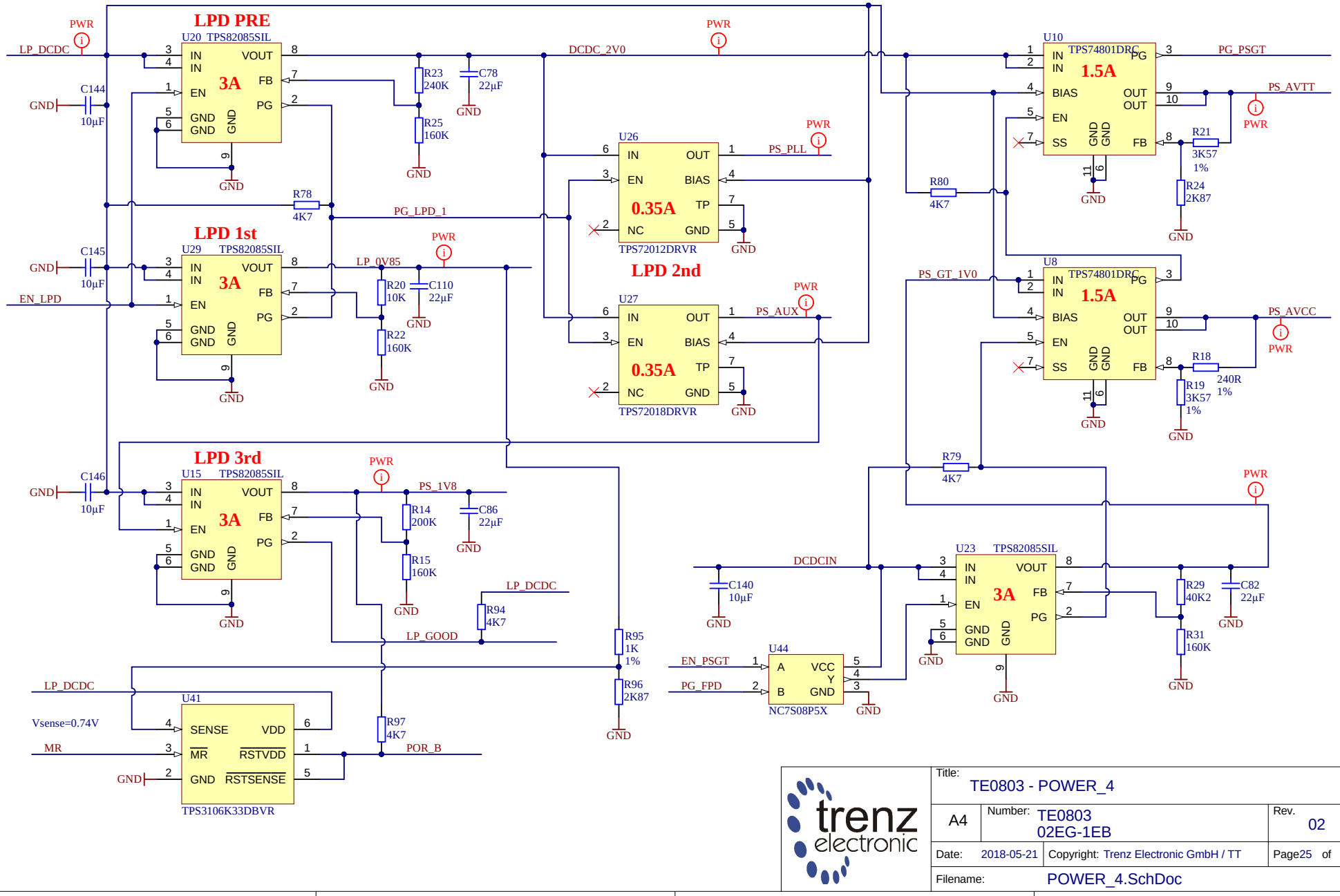

trenz electronic	Title: TE0803 - POWER_4		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH / TT	Page25 of 26
	Filename: POWER_4.SchDoc		

CHANGES REV01a (20.11.2017):
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1) VCU voltage set to 0.9V, R20 changed to 40K , PL_VCU_1V0 renamed to PL_VCU_0V9.

CHANGES REV02 (20.06.2018):
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1) Added LDO to DDR_PLL
2) All differential pairs wath length matched with tollerance 0.1mm (excluding package delays)
3) Added MAC EEPROM U28
4) VPS_MGTRAVCC set to 0.85V
5) Added pull-up resistors R68,R69

trenz electronic	Title: TE0803 - Changes list		
	A4	Number: TE0803 02EG-1EB	Rev. 02
	Date: 2018-05-21	Copyright: Trenz Electronic GmbH	Page 26 of 26
	Filename: Revision_Changes.SchDoc		